ON SOME HOLARCTIC SPHECOID WASPS (ACULEATA, HYMENOPTERA).

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The close affinity of the Nearctic fauna to that of the Palaearctic Region has long been known. Many forms are common to both regions: some of these are rather ancient species that have been present on this continent since prior to the Pleistocene or some recent glacial epoch, whereas others have been introduced in relatively recent time, often accidentally through the agency of man. Yet too often these Holarctic species are known under different names in the literature of the Old and New Worlds. Several interesting cases of the absolute or probable identity of North American forms with common European species of Sphecoid wasps have been amassed in recent years. Some of these examples are presented below.

Euplilis (*Euplilis*) *clavipes* (Linné)

Sphex clavipes Linné, Syst. Nat., ed. X, p. 569, no. 7 (1758).
Crabro (*Rhopalum*) *clavipes* Kohl, Ann. K. K. Naturhist. Hofmus. Wien, XXIX, p. 336, (1915).

A series of this small rubicolous Pemphilid, hitherto unrecorded from North America, has been examined recently. They agree perfectly with European specimens determined by Kohl as [*Crabro* (*Rhopalum*)] *clavipes* (L.). Although *clavipes* may be adventive. I am inclined to believe that it has long been established in the Pacific northwest and merely been unnoticed hitherto. Moreover, its range in this country and Canada is undoubtedly more widespread than the following records indicate.

Washington: Fish Creek, Mt. Rainier National Park; elevation, 2900 ft.; July 12, 1940 (H. K. & M. Townes); 2 ♂. Ashford, Pierce Co.; elevation, 1775 ft.; August 18, 1940 (H. K. & M. Townes): 2 ♂. Oregon: Cannon Beach, Clatsop Co.; August 9, 1940 (H. K. & M. Townes): 3 ♀. Warrenton, Clatsop Co.; August 8, 1940 (H. K. & M. Townes): 3 ♀. Portland, Multnomah Co.; August 1, 1930 (Murray Canova): 1 ♀. Corvallis, Benton Co.; July 6–9, 1936 (George Ferguson): 1 ♀, 1 ♂. California: Crescent City, Del Norte Co.; August 2, 1940 (H. K. & M. Townes): 2 ♂.

Euplilis (*Corynopus*) *coarctatus* (Scopoli)

Sphex coarctata Scopoli, Entom. Carn., p. 293, no. 778, pl. 42, fig. 778 (1763).

Crabro tibialis Fabricius, Suppl. Entom. Syst., p. 271, no. 27–28 (1798).

? *Rhopalum modestum* Rohwer, Entom. News, XIX, p. 257 (1908); XX, p. 145; p. 324 (1909).

Rhopalum pedicellatum Authors (not of Packard).

The common widespread North American species which apparently has been hitherto known as *Rhopalum pedicellatum* is identical with European specimens determined by Kohl as [*Crabro* (*Rhopalum*)] *tibiale* F[abricius, 1798], i.e., *Euplilis coarctatus* (Scopoli, 1763). This species is common and widespread throughout Europe and Kohl has reported it from as far east as Irkutsk, Siberia. Undoubtedly *coarctatus* is a very early preglacial or interglacial immigrant to North America via the Siberian-Alaska land bridge.

Euplilis (*Corynopus*) *pedicellatus* (Packard)

Rhopalum pedicellatum Packard, Proc. Ent. Soc. Phila., VI, p. 380 (1867).

Lectotype.—♀; West Farms, New York. (James Angus; bred from stems of *Spiraea.*) [Academy of Natural Sciences of Philadelphia.]

This little rubicolous Nearctic form has apparently been largely misunderstood in the past. Superficially it is much like the Holarctic *coarctatus,* but the clypeal lobe of the female *pedicellatus* has a short, rather broad, truncate median tooth, whereas that of *coarctatus* terminates in an acute trigonal tooth.

Crossocerus (*Blepharipus*) *ambiguus* (Dahlbom)

Crabro ambiguus Dahlbom, Dispos. method. Hymen., p. 14 (1842).

Blepharipus parkeri Banks. Ann. Ent. Soc. Amer., XIV, p. 17 (1921).

Crabro (*Blepharipus*) *davidsoni* Sandhouse, Ann. Ent. Soc. Amer., XXXI, p. 1 (1938).

I can find no essential difference between European specimens determined by Kohl as *ambiguus* Dahlbom and Nearctic material of *parkeri* Banks and *davidsoni* Sandhouse, and consequently have relegated the two latter names into the synonymy of the first.

This is a common species throughout northeastern North America, ranging from Quebec to Maryland, and from the Atlantic coast to at least as far west as Chicago, Illinois. Whether *ambiguus* is an ancient and long-established immigrant from the Palaearctic

Region, where it is common and widespread, or a relatively recent introduction cannot be determined at present.

Oxybelus bipunctatum Olivier

Oxybelus bipunctatus Olivier, Encycl. method. Insect., VIII, p. 597 (1811).

This is a relatively common and widespread species throughout Europe and western Asia. Apparently *bipunctatum* has been accidentally introduced recently in the eastern United States, as the following records indicate. Whether it will become firmly established, however, only future collecting will reveal.

New York: Half Way Hollow Hills, Long Island; June 7, 1936; 1 ♀. Six Mile Creek, Ithaca, Tompkins Co.; August 2, 1937; 1 ♂.

Trypoxylon (*Trypoxylon*) *figulum* (Linné)

Sphex figulus Linné, Syst. Nat., ed. X, p. 570, no. 9 (1758).

Trypoxylon apicalis Fox, Trans. Amer. Ent. Soc., XVIII, p. 142 (1891).

Trypoxylon (*Trypoxylon*) *apicale* Sandhouse, Amer. Midl. Nat., XXIV, p. 156 (1940).

The late Miss Sandhouse, in her recent excellent review of the Nearctic species of *Trypoxylon,* remarks that ". . . *Trypoxylon apicale* is with difficulty separated from the Palearctic species *figulus.*" This confirms an opinion I formed a dozen years ago, that the Nearctic *apicale* was identical with, or but racially distinct, from the European *figulum.* Many *Trypoxylon* are rubicolous or xylicolous and more or less semidomiciliary in their habits; some of these have become quite widely distributed indirectly through the agency of man. The distribution given by Miss Sandhouse for *apicale* (Quebec, Maine, New Hampshire, and Massachusetts) suggests that *figulum* is a relatively recent established adventive form in northeastern North America. However, much more investigation of the relationship of the Nearctic to the Palaearctic species of *Trypoxylon* is necessary before this can be definitely proven.

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